INTEGRATING DISTRIBUTED PROCESS CONTROL SYSTEM FUNCTIONALITY ON A SINGLE COMPUTER

ABSTRACT OF THE INVENTION

An apparatus is adapted to be used to create software and programming

5   instructions for a distributed process control system having a user workstation remotely located from a distributed controller that controls one or more field devices using control modules. The apparatus includes a computer having a memory and a processing unit as well as a configuration application and a controller application stored on the computer memory to be executed on the processor. The

10   configuration application is further capable of being executed on the user workstation of the distributed process control system to create the control modules for execution by the distributed controller while the controller application is adapted to be executed on the distributed controller to implement one of the control modules during operation of the distributed process control system. In this system, the

15   configuration application, when run on the computer, creates a first control module capable of being used by the distributed controller within the distributed process control system and the controller application causes execution of the first control module within the computer to thereby simulate operation of the distributed process control system. The use of this system enables the simulation and testing of

20   distributed process control system software and control modules without the use of the hardware, e.g., the distributed process controller and field devices, which will ultimately run that software.